

REMARKS

This is in response to the Office Action mailed February 12, 2004. Claims 34-36 have been amended to correct a spelling error. Claims 34-36 are pending and at issue. No new matter has been added. Reconsideration of the application is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 34-36 have been rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter not supported by the specification. The Examiner states that this is an enablement rejection.

The compounds of formula (1) in claims 34-36 exploit certain tethers (or spacer parts) to control the three-dimensional conformation of the macrocyclic molecules as well as the use of cyclic peptides. The tethers are successful in restricting the conformational display of the molecule. Furthermore, this tether part of the molecule also can have interactions with a biological target in addition to its conformational control function.

The compounds of the invention also include structurally restricted amino acids to specifically display side chains in space thus retaining the high potency of linear peptides while circumventing their drawbacks. Indeed, although linear peptides are highly potent and selective biological agents, their use as pharmaceutical products is limited by poor aqueous solubility, metabolic instability, particularly to proteases, low oral bioavailability, inadequate membrane

permeability, rapid excretion decreases duration of pharmacological action, and side effects due to the presence of receptors for the peptide in other non-target areas of an organism.

The compounds of the invention have the ability to direct and control the three-dimensional orientation so as to probe multiple conformations with the same interacting peptide side chain functionalities. In this manner, the optimal conformation for a biological target of interest can be rapidly determined.

The present invention also provides combinatorial libraries comprising a large number of drug-like molecules possessing a variety of well defined three-dimensional shapes and functionalities. The quality of the information obtained from testing these libraries permits the modulation and optimization of any observed activity. Therefore, these libraries accelerate drug discovery and lead to optimization for a large array of biological targets.

Applicants submit that the specification would enable a person of ordinary skill in the art to make and use the macrocyclic tethered tripeptides recited in claims 34-36. No further information beyond that disclosed in the instant specification would be required by those skilled in the art in order to make and use these compounds.

The specification discloses representative examples of the claimed macrocyclic tethered tripeptides (see, for example, pp. 25-27, Tables 1-3; and pp. 35-37, Tables 4-6). These examples constitute a representative cross-section of the compounds called for in the general formulas set forth in claims 34-36.

Additionally, the specification discloses methods of preparing several of the claimed compounds (see, for example, p. 33, line 23 to p. 37, line 7). These methods of preparation include detailed processing steps, such as particular reagents, filtrations, washes, and reaction times (see, for example, p. 34, line 21 to p. 35, line 5).

Upon reading the specification, including the representative examples and the methods of preparation disclosed therein, a person of ordinary skill in the art would be able to practice the claimed invention without having to resort to undue experimentation. *See Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004). Furthermore, it is well established that “a patent disclosure need not enable information within the knowledge of an ordinarily skilled artisan” and that “a patentee preferably omits from the disclosure any routine technology that is well known at the time of the application.” *Id.* at 1254.

Therefore, in view of the foregoing, the specification contains all of the information required to enable a person of ordinary skill in the art to make and use the claimed invention.


Conclusion

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining, which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Dated: August 12, 2004

Respectfully submitted,

By: 
Dianna Goldenson
Reg. No. 52,949
Attorney for Applicants

Darby & Darby P.C.
Post Office Box 5257
New York, NY 10150-5257
212-527-7700